

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Kenneth M. Berner on 03/24/10.

2. The application has been amended as follows:

Amendments To The Claims

The listing of claims presented below will replace all prior versions, and listings, of claims in the application.

Listing of claims:

1-9. (Cancelled)

10. (Currently Amended): An energy storage device comprising:
n, ~~(where~~ wherein n is an integer ≥ 3 [[≥ 3]]), storage elements arranged in a series network; and
n(n-1)/2 identical charge transfer modules, each module electrically connected to and pairing two storage elements of the n storage elements;
wherein each module is configured to provide a bidirectional charge transfer between the two storage elements paired therewith;

wherein each storage element is electrically connected to ~~(n-1)~~ n-1 modules and is paired with each of the other n-1 storage elements.

11. (Previously Amended): An energy storage device as claimed in claim 10, wherein said modules are of a three-pole or four-pole type depending on whether the storage elements paired therewith are adjacent or nonadjacent.

12-13. (Cancelled)

14. (Previously Amended): An energy storage device as claimed in claim 10, wherein each storage element has a pair of terminals and the bidirectional charge transfer between a storage element and the n-1 storage elements paired therewith comprises a charging or discharging current proportional to a first order of the difference between the voltage at the terminals of the element and the average of the voltages at the terminals of the storage elements paired there with.

15-16. (Cancelled)

17. (Previously Presented): The device as claimed in claim 10, wherein said storage elements are electrochemical battery cells, cells of lithium-ion battery type or supercapacitors.

18-19. (Cancelled)

20. (Previously Presented): An electronic system comprising a charger and an energy storage device as claimed in claim 10, said energy storage device being rechargeable by the said charger.

21-22. (Cancelled)

Allowable Subject Matter

3. Claims 10-11, 14, 17, and 20 are allowed.

The following is an examiner's statement of reasons for allowance: In regards to claim 10, the prior art fails to disclose An energy storage device comprising: n , wherein n is an integer ≥ 3 , storage elements arranged in a series network; and $n(n-1)/2$ identical charge transfer modules, each module electrically connected to and pairing two storage elements of the n storage elements; wherein each module is configured to provide a bidirectional charge transfer between the two storage elements paired therewith; wherein each storage element is electrically connected to $n-1$ modules and is paired with each of the other $n-1$ storage elements.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NGUYEN TRAN whose telephone number is (571)270-1269. The examiner can normally be reached on M-F 7:30-5:00, OFF every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica Lewis can be reached on 571-272-1838. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nguyen Tran/
Examiner, Art Unit 2838

*/Bao Q. Vu/
Primary Examiner, Art Unit 2838
March 26, 2010*